

## CATV Duplex Filter

### 5 - 36 MHz / 48 - 1000 MHz

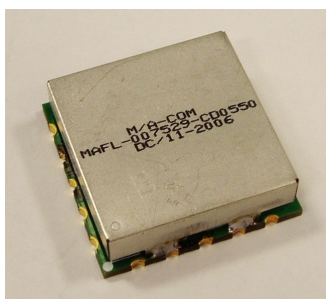
Rev. V2

### Features

- 75  $\Omega$
- SMT unit
- Excellent Temperature Stability
- Excellent Repeatability
- RoHS Compliant and Lead free
- Available on Tape and Reel
- Technology used in this product is patent pending

### Description

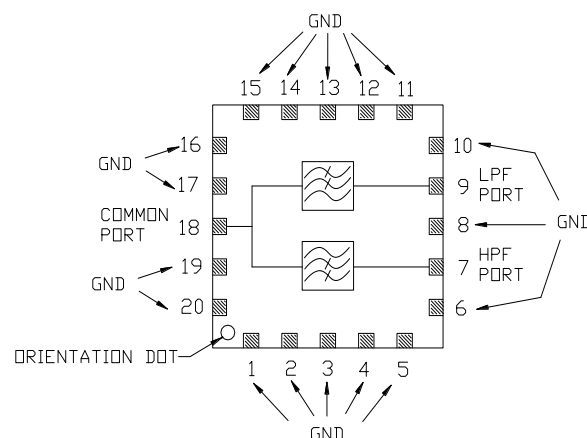
MAFL-007529-CD0550 is a low cost, surface mount duplex filter unit designed for CATV applications.



### Ordering Information

Part Number	Package
MAFL-007529-CD0550	50 Piece Reel

### Functional Schematic



### Pin Configuration

Pin Number	Function
1-6, 8, 10-17, 19, 20	Ground
7	High Pass Port
9	Low Pass Port
18	Common Port

### Electrical Specifications: Freq. = 5 - 36 MHz / 48 - 1000 MHz, $T_A = 25^\circ\text{C}$ , $Z_0 = 75 \Omega$

Parameter	Test Conditions	Units	Min.	Typ.	Max.
Insertion Loss	5 - 36 MHz 48 - 1000 MHz	dB	—	0.5 0.5	1.2 1.1
Insertion Loss Flatness	5 - 36 MHz	dB	—	—	0.5
Crossover Isolation	37 - 47 MHz	dB	30	35	—
Stopband Rejection	5 - 36 MHz 48 - 860 MHz 860 - 1000 MHz	dB	50 50 45	55 55 50	—
Input Return Loss	5 - 36 MHz 48 - 400 MHz 400 - 870 MHz 870 - 1000 MHz	dB	18 18 17 15	21 21 19 17	—
Group Delay	32.5 - 36.0 MHz 48.0 - 51.5 MHz	ns	—	15 23	20 25

## CATV Diplex Filter 5 - 36 MHz / 48 - 1000 MHz

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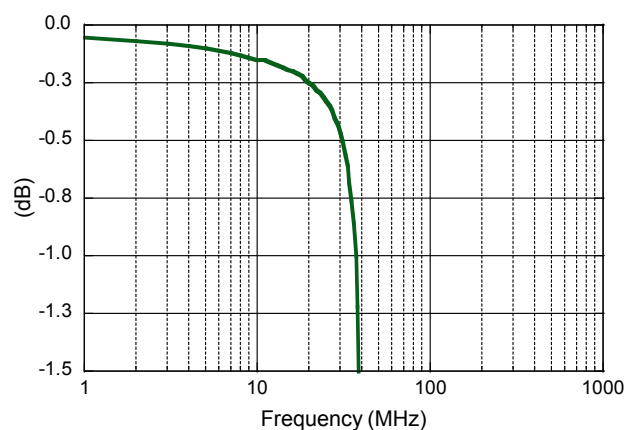
### Absolute Maximum Ratings<sup>1,2</sup>

Parameter	Absolute Maximum
RF Power	250 mW
DC Current	30 mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C

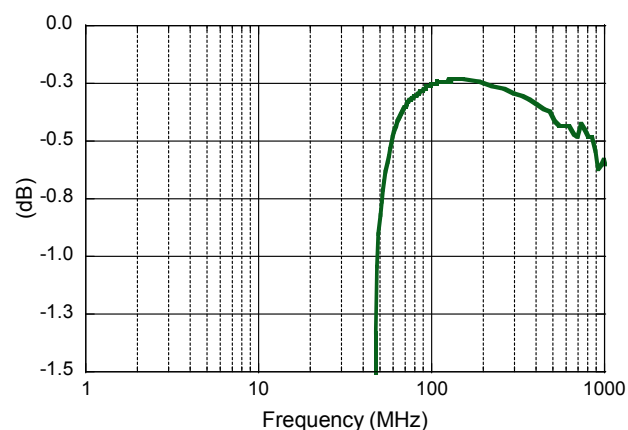
1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. MACOM does not recommend sustained operation near these survivability limits.

### Typical Performance Curves

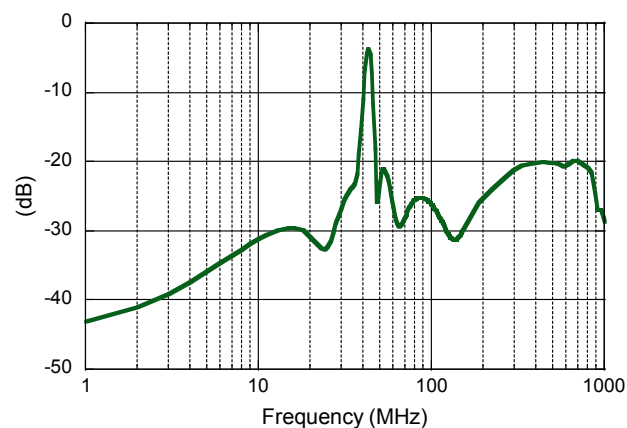
**Low Pass Filter Insertion Loss**



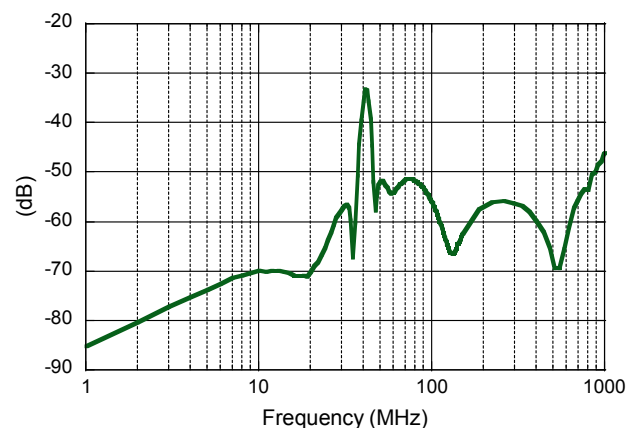
**High Pass Filter Insertion Loss**



**Input Return Loss**



**Isolation**

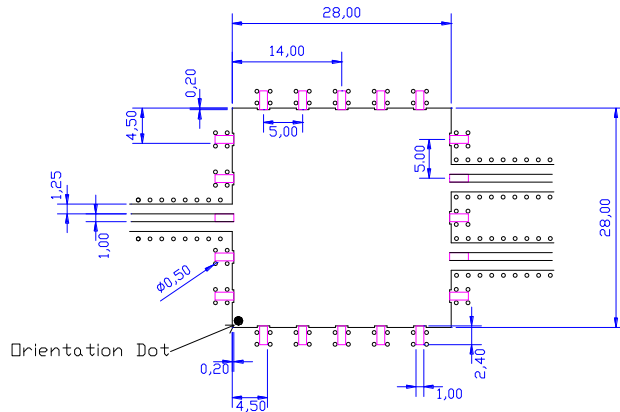


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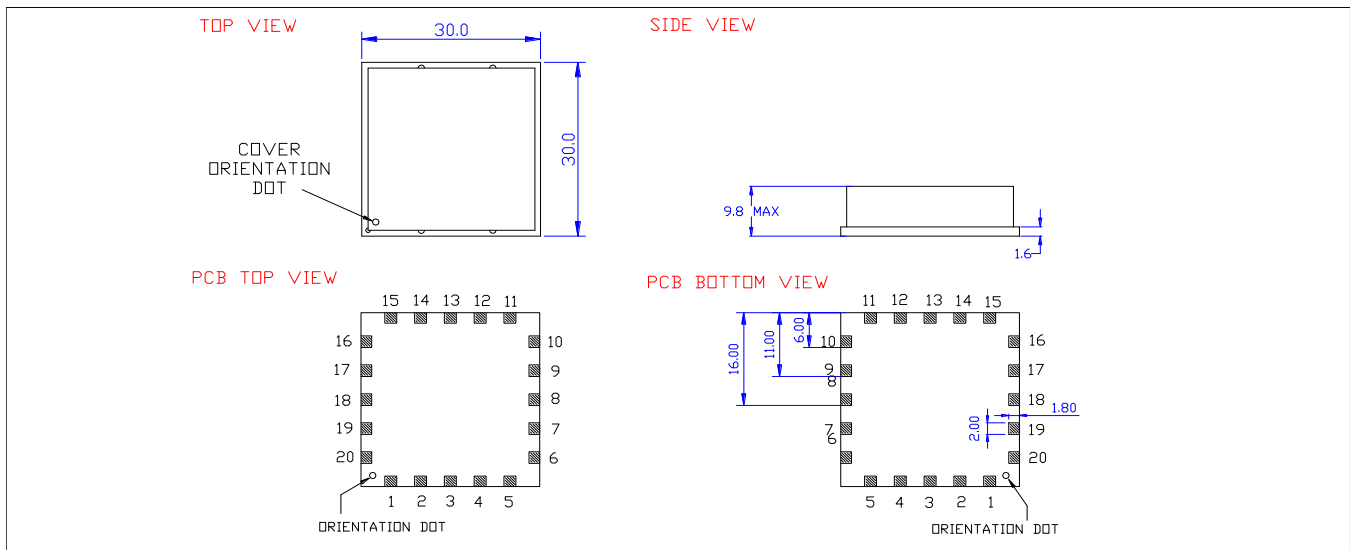
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## Recommended PCB Configuration



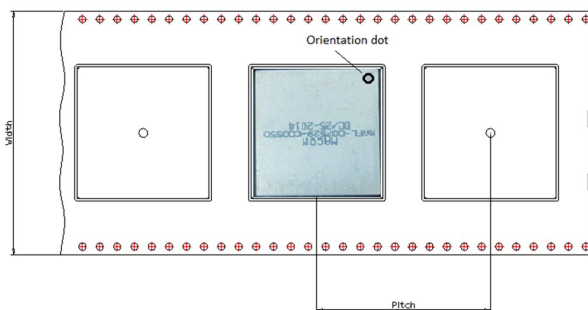
Dimensions in mm. Tolerance: .x  $\pm$  0.1, .xx  $\pm$  0.05

## SM-85 Case Style



Dimensions in mm. Tolerance: .x  $\pm$  0.1, .xx  $\pm$  0.05

## Carrier Tape Orientation



## Tape & Reel Information

Parameter	Units	Value
Qty per reel	pcs	50
Reel size	mm	330
Tape Width	mm	56
Pitch	mm	40
Orientation	-	F20
Reference Application Note ANI-019 for orientation		

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